Accordingly, what is claimed is:

1. A power supply comprising:

an enclosure of length L;

a first end wall disposed at a first end of said enclosure and a second end wall disposed at a second end of said enclosure;

an air permeable air intake port in said first end wall;

an air permeable air exhaust port in said second end wall;

an air flow generator disposed within said enclosure at least a distance L/5 from said air intake port and said air exhaust port, wherein said first end wall and said second end wall define a longitudinal axis of said enclosure.

2. The power supply of claim 1, further comprising:

a first electrical circuit disposed in said enclosure between said air intake port and said air flow generator.

3. The power supply of claim 2, further comprising:

a second electrical circuit disposed in said enclosure between said air exhaust port and said air flow generator.

4. The power supply of claim 3, further comprising:

a first cooling structure, thermally coupled to said first electrical circuit, having a first face substantially parallel to said longitudinal axis and a second face substantially perpendicular

to said longitudinal axis; and

wherein the area of said second face is less than area of said first face.

5. The power supply of claim 3, further comprising:

a first cooling structure, thermally coupled to said second electrical circuit, having a first face substantially parallel to said longitudinal axis and a second face substantially perpendicular to said longitudinal axis; and

wherein the area of said second face is less than area of said first face.

6. The power supply of claim 5, further comprising:

a second cooling structure, thermally coupled to said first electrical circuit, having a third face substantially parallel to said airflow axis and a fourth face substantially perpendicular to said airflow axis; and

wherein the area of said fourth face is less than the area of said third face.

7. The power supply of claim 3, further comprising:

a plurality of cooling structures, thermally coupled to either said first electrical circuit or said second electrical circuit, each of said plurality of cooling structures having a plurality of faces, including a flow face and an impedance face, wherein the summation of the area of the flow faces of the plurality of cooling structures is greater than the summation of the impedance faces of the plurality of cooling structures.

8. The power supply of claim 3, wherein said first electrical circuit is a primary circuit of a power supply.

9. The power supply of claim 3, wherein said first electrical circuit is a primary circuit operable to be coupled to an alternating current power source.

10. The power supply of claim 9, wherein said power supply is a switch mode power supply.

11. A method of operating a power supply, the power supply having an enclosure having an interior and a length (L), the enclosure having first and a second end walls, the end walls defining a longitudinal axis of the enclosure, the first end wall having an air intake port disposed within it, and the second end wall having an air exhaust port disposed within it, the method comprising:

coupling a first electrical circuit within the interior of the enclosure to a source of input power;

transforming, within the first electrical circuit, the input power to an intermediate electrical energy;

transforming the intermediate electrical energy into an output electrical energy in a second electrical circuit;

creating an air flow with an air flow generator disposed within the enclosure between said first circuit and said second circuit and no closer than L/5 to either of said first and second end walls, said air flow flowing from the exterior of said enclosure, in said air intake port, through said enclosure, and out said air exhaust port.

12. A power supply comprising:

an enclosure having an interior and a length (L), said enclosure comprising:

a first and a second end wall;

an air intake port disposed in said first end wall;

an air exhaust port disposed in said second end wall;

wherein said first and second end walls enclose an airflow axis of said enclosure;

an air flow generator, disposed within an interior of said enclosure and operable to create an air flow from the exterior of said enclosure, into said air intake port through said enclosure, out of said air exhaust port, and outwards to the exterior;

a first electrical circuit disposed within said enclosure that is operable to couple to an exterior power source and transform an input power into an intermediate power signal;

a second electrical circuit, disposed within said enclosure and coupled to said first circuit, that is operable to receive said intermediate power signal and provide an output power, said second circuit separated from first circuit by a separation volume, said operation of second circuit shielded from operating characteristics of first circuit;

said air flow generator disposed within said separation volume.

13. The power supply of claim 12, further comprising:

a first cooling structure, thermally coupled to said first electrical circuit, having a first face substantially parallel to said airflow axis and a second face substantially perpendicular to said airflow axis; and

wherein the total area of said second face is less than a total area of said first face.

14. The power supply of claim 12, further comprising:

a first cooling structure, thermally coupled to said second electrical circuit, having a first face substantially parallel to said airflow axis and a second face substantially perpendicular to said airflow axis; and

wherein a total area of said second face is less than a total area of said first face.

15. The power supply of claim 14, further comprising:

a second cooling structure, thermally coupled to said first electrical circuit, having a third face substantially parallel to said airflow axis and a fourth face substantially perpendicular to said airflow axis; and

wherein a total area of said fourth face is less than a total area of said third face.

16. The power supply of claim 12, further comprising:

a plurality of cooling structures, thermally coupled to either said first electrical circuit or said second electrical circuit, each of said plurality of cooling structures having a plurality of faces, including a flow face and an impedance face, wherein the summation of the area of the flow faces of the plurality of cooling structures is greater than the summation of the impedance faces of the plurality of cooling structures.

17. The power supply of claim 12, wherein said first electrical circuit is a primary stage of a power supply.

18. The power supply of claim 17, wherein said primary stage is operable to be coupled to an alternating current power source.

19. The power supply of claim 17, wherein said power supply is a switch hose power supply.

20. The power supply of claim 12, wherein said air flow generator is disposed within said enclosure so that it is no nearer to either of said first and second end walls than a dimension measuring L/5.

21. A method of operating a power supply, the power supply having an enclosure with an interior and a length (L), a first and a second end wall, the first and second end walls defining a longitudinal axis of the enclosure, the first end wall having an air intake port disposed within it, and the second end wall having an air exhaust port disposed within it, the method comprising:

coupling a first electrical circuit within the interior of the enclosure to an input power source;

transforming, within the first electrical circuit, the input power to an intermediate electrical signal;

transforming the intermediate electrical signal into an output electrical signal in a second electrical circuit;

creating an air flow from a volume within said enclosure, said volume disposed between said first circuit and said second electrical circuit and no closer than L/5 to either of said first and second end walls, said air flow flowing from the exterior of said enclosure, through said air intake port, through said enclosure, and out said air exhaust port to the exterior; and

isolating from electrical effects said second electrical circuit from the operation of said first electrical circuit and vice versa.